

SEQUENCE LISTING

<110> SHITARA, KENYA
SHIBUYA, MASABUMI

<120> DIAGNOSTIC AGENT AND THERAPEUTIC AGENT FOR DISEASE
RELATED TO MONOCYTE AND MACROPHAGE

<130> 249-243

<140> 10/009,723

<141> 2001-12-17

<150> PCT/JP00/03957

<151> 2000-06-16

<150> P HEI. 11-171709

<151> 1999-06-17

<160> 99

<170> PatentIn Ver. 2.1

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agt agt aac tat ata agt tgg ttg aag cag aag cct gga cag agt ctt	192
Ser Ser Asn Tyr Ile Ser Trp Leu Lys Gln Lys Pro Gly Gln Ser Leu	
30 35 40 45	

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 Glu Trp Ile Ala Trp Ile Tyr Ala Gly Thr Gly Asp Ala Ser Tyr Asn
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cag aag ttc aca gcc aag gcc cac gtg act gta gac aca tcc tcc agc 288
 Gln Lys Phe Thr Ala Lys Ala His Val Thr Val Asp Thr Ser Ser Ser
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 Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Thr Glu Asp Ser Ala Ile
 80 85 90

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 Tyr Tyr Cys Ala Arg His Gly Gly Asp Gly Tyr Trp Phe Ala Tyr Trp
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 Met Ser Ala Ser Gln Gly Glu Lys Val Thr Met Thr Cys Ser Ala Ser
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tca agt gtc agt tac atg cac tgg tac cag cag aag tca ggc acc tcc 192
 Ser Ser Val Ser Tyr Met His Trp Tyr Gln Gln Lys Ser Gly Thr Ser
 30 35 40

ccc aaa aga tgg att tat gac aca tcc aaa ctg cct tct ggt gtc cct 240
 Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Pro Ser Gly Val Pro
 45 50 55

tat ttc tgt gca aga gat ggt gac tat tac ttt gac tac tgg ggc caa 384
Tyr Phe Cys Ala Arg Asp Gly Asp Tyr Tyr Phe Asp Tyr Trp Gly Gln
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15 20 25

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Pro Lys Leu Leu Ile Tyr Arg Thr Ser Asn Leu Ala Ser Gly Val Pro
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Phe Arg Phe Ser Gly Ser Gly Ser Gly Thr Phe Tyr Ser Leu Thr Ile
60 65 70

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<210> 14
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 Val Tyr Ala Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys
 -1 1 5 10

cct ggc gcc tca gtg aag gtc tcc tgc aag gct tct gga tac acc ttc 144
 Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe
 15 20 25

agc agt aac tat ata agt tgg gtg cga cag gcc cct gga caa ggg ctt 192
 Ser Ser Asn Tyr Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu
 30 35 40 45

gag tgg atg gga tgg att tat gct gga act ggt gat gcc agc tat aat 240
 Glu Trp Met Gly Trp Ile Tyr Ala Gly Thr Gly Asp Ala Ser Tyr Asn
 50 55 60

cag aag ttc aca gcc aga gtc acc att acc gtc gac aca tcc acg agc 288
 Gln Lys Phe Thr Ala Arg Val Thr Ile Thr Val Asp Thr Ser Thr Ser
 65 70 75

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 Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val
 80 85 90

tat tac tgt gcg aga cac ggg ggg gac ggc tac tgg ttt gct tac tgg 384
 Tyr Tyr Cys Ala Arg His Gly Gly Asp Gly Tyr Trp Phe Ala Tyr Trp
 95 100 105

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 <212> DNA
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gtc cac tcc cag gtg cag ctg gtg cag tcc gga gct gag gtg aag aag 96
Val His Ser Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys
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cct ggg gcc tca gtg aag gtc tcc tgc aag gct tct gga tac acc ttc 144
Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe
      15                      20                      25

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Ile Asn Tyr Asn Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu
      30                      35                      40                      45

gag tgg atg gga gct att ttt cca gga aat ggt ttt act tcc tac aat 240
Glu Trp Met Gly Ala Ile Phe Pro Gly Asn Gly Phe Thr Ser Tyr Asn
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cag aag ttc aag ggc aga gtc acc att acc gtc gac aag tcc acg agc 288
Gln Lys Phe Lys Gly Arg Val Thr Ile Thr Val Asp Lys Ser Thr Ser
      65                      70                      75

aca gcc tac atg gag ctg agc agc ctg aga tct gag gac acg gcc gtg 336
Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val
      80                      85                      90

tat tac tgt gcg aga gat ggt gac tat tac ttt gac tac tgg ggc cag 384
Tyr Tyr Cys Ala Arg Asp Gly Asp Tyr Tyr Phe Asp Tyr Trp Gly Gln
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<220>
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tgaagatttt gcaacttatt actgtcagca gtgg 94

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gtc ata ata tcc aga gga gat atc cag atg acc cag tct cca tcc tcc 96
 Val Ile Ile Ser Arg Gly Asp Ile Gln Met Thr Gln Ser Pro Ser Ser
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ctg tct gca tct gta gga gac aga gtc acc atc act tgt agt gct agc 144
 Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Ser Ala Ser
 15 20 25

tca agt gtc agt tac atg cac tgg tat cag cag aaa cca ggg aaa gcc 192
 Ser Ser Val Ser Tyr Met His Trp Tyr Gln Gln Lys Pro Gly Lys Ala
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cct aag ctt ctg atc tat gac aca tcc aaa ctg cct tct ggg gtc cca 240
 Pro Lys Leu Leu Ile Tyr Asp Thr Ser Lys Leu Pro Ser Gly Val Pro
 45 50 55

tca agg ttc agc ggc agt gga tct ggg aca gat ttc act ctc acc atc 288
 Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
 60 65 70

agc agc ctg cag cct gaa gat ttt gca act tat tac tgt cag cag tgg 336
 Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Trp
 75 80 85 90

agt agt aac cca ccc acg ttc ggc caa ggg acc aag gta gag atc aaa c 385
 Ser Ser Asn Pro Pro Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
 95 100 105

<210> 46
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 <212> DNA
 <213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic DNA

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ctaatacagt cctcagtc atg 84

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<211> 96

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic DNA

<400> 47

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cgatgtctcc tctggacatt atgactgagg cactga 96

<210> 48

<211> 85

<212> DNA

<213> Artificial Sequence

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gcagaaacca ggacagcctc ctaag 85

<210> 49

<211> 87

<212> DNA

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<400> 49

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<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic DNA

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gtc ata atg tcc aga gga gac atc gtg atg acc cag tct cca gac tcc 96
Val Ile Met Ser Arg Gly Asp Ile Val Met Thr Gln Ser Pro Asp Ser
-5 -1 1 5 10

ctg gct gtg tct ctg ggc gag agg gcc acc atc aac tgc agt gcc agc 144
Leu Ala Val Ser Leu Gly Glu Arg Ala Thr Ile Asn Cys Ser Ala Ser
15 20 25

tcg agt gta agt tac atg cac tgg tac cag cag aaa cca gga cag cct 192
Ser Ser Val Ser Tyr Met His Trp Tyr Gln Gln Lys Pro Gly Gln Pro
30 35 40

cct aag ctg ctc att tac aga aca tcc aac ctg gct tct ggg gtc cct 240
Pro Lys Leu Leu Ile Tyr Arg Thr Ser Asn Leu Ala Ser Gly Val Pro
45 50 55

gac cga ttc agt ggc agc ggg tct ggg aca gat ttc act ctc acc atc 288
 Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
 60 65 70

agc agc ctg cag gct gaa gac gtc gca gtt tat tac tgt cat cag tgg 336
 Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys His Gln Trp
 75 80 85 90

agt atg tac acg ttc ggc caa ggg acc aag gtg gag atc aaa c 379
 Ser Met Tyr Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
 95 100

<210> 53
 <211> 8
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic DNA

<400> 53
 ctctagag 8

<210> 54
 <211> 60
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic DNA

<400> 54
 cagtgttctt ggctgtgcaa aaagtggagg catttttcat aatagaaggt gcctacgtag 60

<210> 55
 <211> 67
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic DNA

<400> 55
 gatcctacgt aggcaccttc tattatgaaa aatgcctcca cttttgcaca gccaagaaca 60
 ctgcatg 67

<210> 56
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic DNA

<400> 56
 gtataatgag cggccgcg 18

<210> 57
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic DNA

<400> 57
 gatccgcggc cgctcattat ac 22

<210> 58
 <211> 56
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic DNA

<400> 58
 gaaggaaaca gaaggcgcca tctatatatt tattcgaggt accaatacaa tcatag 56

<210> 59
 <211> 30
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic DNA

<400> 59
 aaactgactt ggccggcgcc atttatgtct 30

<210> 60
 <211> 30
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic DNA

<400> 60
 cataaatcct ataggtacca acgacaacta 30

<210> 61
 <211> 87
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic DNA

<400> 61

caggaaacag ctatgacgaa ttccaccatg gattttcaag tgcagatddd cagcttcctg 60
ctaatacagtg cctcagtcac aatatcc 87

<210> 62

<211> 93

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic DNA

<400> 62

aagtgatggt gactctgtct cctacagatg cagacagggg ggatggagac tgggtcatct 60
ggatatctcc tctggatatt atgactgagg cac 93

<210> 63

<211> 85

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic DNA

<400> 63

agacagagtc accatcactt gtagtgccag ctcgagtgtg agttacatgc actggatatca 60
gcagaaacca gggaaagccc ctaag 85

<210> 64

<211> 84

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic DNA

<400> 64

atccactgcc gctgaacctt gatgggaccc cagaagccag gttggatggt ctatagatca 60
gaagcttagg ggctttccct ggtt 84

<210> 65

<211> 94

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic DNA

<400> 65

aaggttcagc ggcatgtgat ctgggacaga ttccactctc accatcagca gctgcagcc 60
tgaagatddd gcaacttatt actgtcatca gtgg 94

<210> 66
 <211> 85
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic DNA

<400> 66
 gttttccag tcacgaccgt acgtttgatc tctaccttgg tcccttggcc gaacgtgtac 60
 atactccact gatgacagta ataag 85

<210> 67
 <211> 379
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic DNA

<220>
 <221> sig_peptide
 <222> (1)..(66)

<220>
 <221> mat_peptide
 <222> (67)..(378)

<220>
 <221> CDS
 <222> (1)..(378)

<400> 67
 atg gat ttt caa gtg cag att ttc agc ttc ctg cta atc agt gcc tca 48
 Met Asp Phe Gln Val Gln Ile Phe Ser Phe Leu Leu Ile Ser Ala Ser
 -20 -15 -10

gtc ata ata tcc aga gga gat atc cag atg acc cag tct cca tcc tcc 96
 Val Ile Ile Ser Arg Gly Asp Ile Gln Met Thr Gln Ser Pro Ser Ser
 -5 -1 1 5 10

ctg tct gca tct gta gga gac aga gtc acc atc act tgt agt gcc agc 144
 Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Ser Ala Ser
 15 20 25

tcg agt gta agt tac atg cac tgg tat cag cag aaa cca ggg aaa gcc 192
 Ser Ser Val Ser Tyr Met His Trp Tyr Gln Gln Lys Pro Gly Lys Ala
 30 35 40

cct aag ctt ctg atc tat aga aca tcc aac ctg gct tct ggg gtc cca 240
 Pro Lys Leu Leu Ile Tyr Arg Thr Ser Asn Leu Ala Ser Gly Val Pro
 45 50 55

tca agg ttc agc ggc agt gga tct ggg aca gat ttc act ctc acc atc 288
 Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
 60 65 70

agc agc ctg cag cct gaa gat ttt gca act tat tac tgt cat cag tgg 336
 Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys His Gln Trp
 75 80 85 90

agt atg tac acg ttc ggc caa ggg acc aag gta gag atc aaa c 379
 Ser Met Tyr Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
 95 100

<210> 68
 <211> 80
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic DNA

<400> 68
 caggaaacag ctatgactcc ggagctgagg tgaagaagcc tggggcctca gtgaaggtct 60
 cctgcaaggc ttctggatac 80

<210> 69
 <211> 80
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic DNA

<400> 69
 ccactcaagc ccttgatccag gggcctgtcg caccagtgcc atattgtaat taatgaaggt 60
 gtatccagaa gccttgacagg 80

<210> 70
 <211> 81
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic DNA

<400> 70
 ctggacaagg gcttgagtgg atgggagcta tttttccagg aaatgggtttt acttcctaca 60
 atcagaagtt caagggcaga g 81

<210> 71
 <211> 79
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic DNA

<400> 71

tctcaggctg cgcagctgca ttaggctgt gctcgtggac ttgtcgacgg taatgggtgac 60
tctgcccttg aacttctga 79

<210> 72

<211> 83

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic DNA

<400> 72

tgcagctgcg cagcctgaga tctgaggaca cggccgtgta tttctgtgcg agagatgggtg 60
actattactt tgactactgg ggc 83

<210> 73

<211> 81

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic DNA

<400> 73

gttttccag tcacgacggg cccttggtgg aggctgagga gacggtgacc agggttccct 60
ggccccagta gtcaaagtaa t 81

<210> 74

<211> 409

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic DNA

<220>

<221> sig_peptide

<222> (1)..(57)

<220>

<221> mat_peptide

<222> (58)..(408)

<220>

<221> CDS

<222> (1)..(408)

<400> 74

atg gga ttc agc agg atc ttt ctc ttc ctc ctg tca gtg act aca ggt 48
Met Gly Phe Ser Arg Ile Phe Leu Phe Leu Leu Ser Val Thr Thr Gly
-15 -10 -5

```

gtc cac tcc cag gtg cag ctg gtg cag tcc gga gct gag gtg aag aag 96
Val His Ser Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys
      -1  1              5              10

cct ggg gcc tca gtg aag gtc tcc tgc aag gct tct gga tac acc ttc 144
Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe
      15              20              25

att aat tac aat atg cac tgg gtg cga cag gcc cct gga caa ggg ctt 192
Ile Asn Tyr Asn Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu
      30              35              40              45

gag tgg atg gga gct att ttt cca gga aat ggt ttt act tcc tac aat 240
Glu Trp Met Gly Ala Ile Phe Pro Gly Asn Gly Phe Thr Ser Tyr Asn
              50              55              60

cag aag ttc aag ggc aga gtc acc att acc gtc gac aag tcc acg agc 288
Gln Lys Phe Lys Gly Arg Val Thr Ile Thr Val Asp Lys Ser Thr Ser
              65              70              75

aca gcc tac atg cag ctg cgc agc ctg aga tct gag gac acg gcc gtg 336
Thr Ala Tyr Met Gln Leu Arg Ser Leu Arg Ser Glu Asp Thr Ala Val
              80              85              90

tat ttc tgt gcg aga gat ggt gac tat tac ttt gac tac tgg ggc cag 384
Tyr Phe Cys Ala Arg Asp Gly Asp Tyr Tyr Phe Asp Tyr Trp Gly Gln
              95              100              105

gga acc ctg gtc acc gtc tcc tca g 409
Gly Thr Leu Val Thr Val Ser Ser
110              115

```

<210> 75

<211> 87

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic DNA

<400> 75

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caggaaacag ctatgacgaa ttccaccatg gattttcaag tgcagatttt cagcttcctg 60
ctaatacgtg cctcagtcac aatatcc 87

```

<210> 76

<211> 93

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic DNA

<400> 76

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aagtgatggt gacctcctct cctacagatg cagacaggga ggatggagac tgggtcatct 60
ggatatctcc tctggatatt atgactgagg cac 93

```

<210> 77
 <211> 85
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic DNA

<400> 77
 agaggaggtc accatcactt gtagtgccag ctcgagtgtg agttacatgc actggtatca 60
 gcagaaacca gggaaagccc ctaag 85

<210> 78
 <211> 84
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic DNA

<400> 78
 atccactgcc gctgaacctt gatgggaccc cagaagccag gttggatggt ctatagatca 60
 gaagcttagg ggctttccct ggtt 84

<210> 79
 <211> 94
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic DNA

<400> 79
 aaggttcagc ggcagtggat ctgggacatt ttatactctc accatcagca gcctgcagcc 60
 tgaagatttt gcaacttatt actgtcatca gtgg 94

<210> 80
 <211> 85
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic DNA

<400> 80
 gttttcccag tcacgaccgt acgtttgatc tctaccttgg tcccttggcc gaacgtgtac 60
 atactccact gatgacagta ataag 85

<210> 81
 <211> 379
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic DNA

<220>

<221> sig_peptide

<222> (1)..(66)

<220>

<221> mat_peptide

<222> (67)..(378)

<220>

<221> CDS

<222> (1)..(378)

<400> 81

atg	gat	ttt	caa	gtg	cag	att	ttc	agc	ttc	ctg	cta	atc	agt	gcc	tca	48
Met	Asp	Phe	Gln	Val	Gln	Ile	Phe	Ser	Phe	Leu	Leu	Ile	Ser	Ala	Ser	
		-20					-15					-10				

gtc	ata	ata	tcc	aga	gga	gat	atc	cag	atg	acc	cag	tct	cca	tcc	tcc	96
Val	Ile	Ile	Ser	Arg	Gly	Asp	Ile	Gln	Met	Thr	Gln	Ser	Pro	Ser	Ser	
	-5				-1	1				5					10	

ctg	tct	gca	tct	gta	gga	gag	gag	gtc	acc	atc	act	tgt	agt	gcc	agc	144
Leu	Ser	Ala	Ser	Val	Gly	Glu	Glu	Val	Thr	Ile	Thr	Cys	Ser	Ala	Ser	
				15				20						25		

tcg	agt	gta	agt	tac	atg	cac	tgg	tat	cag	cag	aaa	cca	ggg	aaa	gcc	192
Ser	Ser	Val	Ser	Tyr	Met	His	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Lys	Ala	
			30					35					40			

cct	aag	ctt	ctg	atc	tat	aga	aca	tcc	aac	ctg	gct	tct	ggg	gtc	cca	240
Pro	Lys	Leu	Leu	Ile	Tyr	Arg	Thr	Ser	Asn	Leu	Ala	Ser	Gly	Val	Pro	
		45					50					55				

tca	agg	ttc	agc	ggc	agt	gga	tct	ggg	aca	ttt	tat	act	ctc	acc	atc	288
Ser	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Phe	Tyr	Thr	Leu	Thr	Ile	
	60					65					70					

agc	agc	ctg	cag	cct	gaa	gat	ttt	gca	act	tat	tac	tgt	cat	cag	tgg	336
Ser	Ser	Leu	Gln	Pro	Glu	Asp	Phe	Ala	Thr	Tyr	Tyr	Cys	His	Gln	Trp	
	75				80					85					90	

agt	atg	tac	acg	ttc	ggc	caa	ggg	acc	aag	gta	gag	atc	aaa	c		379
Ser	Met	Tyr	Thr	Phe	Gly	Gln	Gly	Thr	Lys	Val	Glu	Ile	Lys			
				95				100								

<210> 82

<211> 138

<212> PRT

<213> Mus musculus

<400> 82

Met	Glu	Trp	Asn	Trp	Val	Val	Leu	Phe	Leu	Leu	Ser	Leu	Thr	Ala	Gly	
					-15				-10					-5		

Val Tyr Ala Gln Gly Gln Met Gln Gln Ser Gly Ala Glu Leu Val Lys
 -1 1 5 10
 Pro Gly Ala Ser Val Lys Leu Ser Cys Lys Pro Ser Gly Phe Thr Phe
 15 20 25
 Ser Ser Asn Tyr Ile Ser Trp Leu Lys Gln Lys Pro Gly Gln Ser Leu
 30 35 40 45
 Glu Trp Ile Ala Trp Ile Tyr Ala Gly Thr Gly Asp Ala Ser Tyr Asn
 50 55 60
 Gln Lys Phe Thr Ala Lys Ala His Val Thr Val Asp Thr Ser Ser Ser
 65 70 75
 Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Thr Glu Asp Ser Ala Ile
 80 85 90
 Tyr Tyr Cys Ala Arg His Gly Gly Asp Gly Tyr Trp Phe Ala Tyr Trp
 95 100 105
 Gly Gln Gly Thr Leu Val Thr Val Ser Ala
 110 115

<210> 83
 <211> 128
 <212> PRT
 <213> Mus musculus

<400> 83
 Met Asp Phe Gln Val Gln Ile Phe Ser Phe Leu Leu Ile Ser Ala Ser
 -20 -15 -10
 Val Ile Ile Ser Arg Gly Gln Leu Val Leu Thr Gln Ser Pro Ala Ile
 -5 -1 1 5 10
 Met Ser Ala Ser Gln Gly Glu Lys Val Thr Met Thr Cys Ser Ala Ser
 15 20 25
 Ser Ser Val Ser Tyr Met His Trp Tyr Gln Gln Lys Ser Gly Thr Ser
 30 35 40
 Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Pro Ser Gly Val Pro
 45 50 55
 Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile
 60 65 70
 Ser Ser Met Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp
 75 80 85 90
 Ser Ser Asn Pro Pro Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys
 95 100 105

<210> 84

Met	Gly	Phe	Ser	Arg -15	Ile	Phe	Leu	Phe	Leu	Leu	Ser	Val	Thr	Thr	Gly
Val	His	Ser	Gln	Ala	Phe	Leu	Gln	Gln	Ser	Gly	Ala	Glu	Leu	Val	Arg
Pro	Gly	Ala	Ser	Val	Lys	Met	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe
Ile	Asn	Tyr	Asn	Met	His	Trp	Val	Lys	Gln	Thr	Pro	Arg	Gln	Gly	Leu
Glu	Trp	Ile	Gly	Ala	Ile	Phe	Pro	Gly	Asn	Gly	Phe	Thr	Ser	Tyr	Asn
Gln	Lys	Phe	Lys	Gly	Lys	Ala	Thr	Leu	Thr	Val	Asp	Lys	Ser	Ser	Ser
Thr	Val	Tyr	Met	Gln	Leu	Arg	Ser	Leu	Thr	Ser	Glu	Asp	Ser	Ala	Val
Tyr	Phe	Cys	Ala	Arg	Asp	Gly	Asp	Tyr	Tyr	Phe	Asp	Tyr	Trp	Gly	Gln
Gly	Thr	Thr	Leu	Thr	Val	Ser	Ser								

```
<210> 85
<211> 126
<212> PRT
<213> Mus musculus
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Met	Asp	Phe	Gln	Val	Gln	Ile	Phe	Ser	Phe	Leu	Leu	Ile	Ser	Ala	Ser
		-20					-15					-10			
Val	Ile	Met	Ser	Arg	Gly	Gln	Ile	Val	Leu	Thr	Gln	Ser	Pro	Ala	Ile
	-5				-1	1				5					10
Met	Ser	Ala	Ser	Leu	Gly	Glu	Glu	Ile	Thr	Leu	Thr	Cys	Ser	Ala	Ser
				15					20					25	
Ser	Ser	Val	Ser	Tyr	Met	His	Trp	Tyr	Gln	Gln	Lys	Ser	Gly	Thr	Ser
			30					35					40		
Pro	Lys	Leu	Leu	Ile	Tyr	Arg	Thr	Ser	Asn	Leu	Ala	Ser	Gly	Val	Pro
		45					50					55			
Phe	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Phe	Tyr	Ser	Leu	Thr	Ile
	60					65					70				

Ser Ser Val Glu Ala Glu Asp Ala Ala Asp Tyr Tyr Cys His Gln Trp
 75 80 85 90

Ser Met Tyr Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
 95 100

<210> 86

<211> 138

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 humanized antibody

<400> 86

Met Glu Trp Asn Trp Val Val Leu Phe Leu Leu Ser Leu Thr Ala Gly
 -15 -10 -5

Val Tyr Ala Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys
 -1 1 5 10

Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe
 15 20 25

Ser Ser Asn Tyr Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu
 30 35 40 45

Glu Trp Met Gly Trp Ile Tyr Ala Gly Thr Gly Asp Ala Ser Tyr Asn
 50 55 60

Gln Lys Phe Thr Ala Arg Val Thr Ile Thr Val Asp Thr Ser Thr Ser
 65 70 75

Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val
 80 85 90

Tyr Tyr Cys Ala Arg His Gly Gly Asp Gly Tyr Trp Phe Ala Tyr Trp
 95 100 105

Gly Gln Gly Thr Leu Val Thr Val Ser Ser
 110 115

<210> 87

<211> 136

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 humanized antibody

<400> 87

Met Gly Phe Ser Arg Ile Phe Leu Phe Leu Leu Ser Val Thr Thr Gly
 -15 -10 -5

```

Val His Ser Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys
      -1  1              5              10
Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe
      15              20              25
Ile Asn Tyr Asn Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu
      30              35              40              45
Glu Trp Met Gly Ala Ile Phe Pro Gly Asn Gly Phe Thr Ser Tyr Asn
              50              55              60
Gln Lys Phe Lys Gly Arg Val Thr Ile Thr Val Asp Lys Ser Thr Ser
              65              70              75
Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val
              80              85              90
Tyr Tyr Cys Ala Arg Asp Gly Asp Tyr Tyr Phe Asp Tyr Trp Gly Gln
              95              100             105
Gly Thr Leu Val Thr Val Ser Ser
110              115

```

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<210> 88
<211> 128
<212> PRT
<213> Artificial Sequence

```

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<220>
<223> Description of Artificial Sequence: Synthetic
      humanized antibody

```

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<400> 88
Met Asp Phe Gln Val Gln Ile Phe Ser Phe Leu Leu Ile Ser Ala Ser
      -20              -15              -10
Val Ile Ile Ser Arg Gly Asp Ile Gln Met Thr Gln Ser Pro Ser Ser
      -5              -1  1              5              10
Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Ser Ala Ser
              15              20              25
Ser Ser Val Ser Tyr Met His Trp Tyr Gln Gln Lys Pro Gly Lys Ala
              30              35              40
Pro Lys Leu Leu Ile Tyr Asp Thr Ser Lys Leu Pro Ser Gly Val Pro
              45              50              55
Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
              60              65              70
Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Trp
              75              80              85              90

```

<220>
<223> Description of Artificial Sequence: Synthetic
humanized antibody

```
<210> 90
<211> 126
<212> PRT
<213> Artificial Sequence
```

```

<400> 90
Met Asp Phe Gln Val Gln Ile Phe Ser Phe Leu Leu Ile Ser Ala Ser
      -20                      -15                      -10

Val Ile Ile Ser Arg Gly Asp Ile Gln Met Thr Gln Ser Pro Ser Ser
      -5                -1  1                5                10

Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Ser Ala Ser
      15                20                25

```

Ser Ser Val Ser Tyr Met His Trp Tyr Gln Gln Lys Pro Gly Lys Ala
 30 35 40
 Pro Lys Leu Leu Ile Tyr Arg Thr Ser Asn Leu Ala Ser Gly Val Pro
 45 50 55
 Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
 60 65 70
 Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys His Gln Trp
 75 80 85 90
 Ser Met Tyr Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
 95 100

<210> 91

<211> 136

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
humanized antibody

<400> 91

Met Gly Phe Ser Arg Ile Phe Leu Phe Leu Leu Ser Val Thr Thr Gly
 -15 -10 -5
 Val His Ser Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys
 -1 1 5 10
 Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe
 15 20 25
 Ile Asn Tyr Asn Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu
 30 35 40 45
 Glu Trp Met Gly Ala Ile Phe Pro Gly Asn Gly Phe Thr Ser Tyr Asn
 50 55 60
 Gln Lys Phe Lys Gly Arg Val Thr Ile Thr Val Asp Lys Ser Thr Ser
 65 70 75
 Thr Ala Tyr Met Gln Leu Arg Ser Leu Arg Ser Glu Asp Thr Ala Val
 80 85 90
 Tyr Phe Cys Ala Arg Asp Gly Asp Tyr Tyr Phe Asp Tyr Trp Gly Gln
 95 100 105
 Gly Thr Leu Val Thr Val Ser Ser
 110 115

<210> 92

<211> 126

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
humanized antibody

<400> 92

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Met Asp Phe Gln Val Gln Ile Phe Ser Phe Leu Leu Ile Ser Ala Ser
      -20                      -15                      -10

Val Ile Ile Ser Arg Gly Asp Ile Gln Met Thr Gln Ser Pro Ser Ser
      -5          -1  1                      5          10

Leu Ser Ala Ser Val Gly Glu Glu Val Thr Ile Thr Cys Ser Ala Ser
              15                      20                      25

Ser Ser Val Ser Tyr Met His Trp Tyr Gln Gln Lys Pro Gly Lys Ala
              30                      35                      40

Pro Lys Leu Leu Ile Tyr Arg Thr Ser Asn Leu Ala Ser Gly Val Pro
              45                      50                      55

Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Phe Tyr Thr Leu Thr Ile
              60                      65                      70

Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys His Gln Trp
              75                      80                      85                      90

Ser Met Tyr Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
              95                      100

```

<210> 93

<211> 117

<212> PRT

<213> Mus musculus

<400> 93

```

Gln Ala Phe Leu Gln Gln Ser Gly Ala Glu Leu Val Arg Pro Gly Ala
  1              5              10              15

Ser Val Lys Met Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ile Asn Tyr
      20              25              30

Asn Met His Trp Val Lys Gln Thr Pro Arg Gln Gly Leu Glu Trp Ile
      35              40              45

Gly Ala Ile Phe Pro Gly Asn Gly Phe Thr Ser Tyr Asn Gln Lys Phe
      50              55              60

Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Val Tyr
      65              70              75              80

Met Gln Leu Arg Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys
      85              90              95

Ala Arg Asp Gly Asp Tyr Tyr Phe Asp Tyr Trp Gly Gln Gly Thr Thr
      100              105              110

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Leu Thr Val Ser Ser
115

<210> 94
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
humanized antibody

<400> 94
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ile Asn Tyr
20 25 30
Asn Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45
Gly Ala Ile Phe Pro Gly Asn Gly Phe Thr Ser Tyr Asn Gln Lys Phe
50 55 60
Lys Gly Arg Val Thr Ile Thr Val Asp Lys Ser Thr Ser Thr Ala Tyr
65 70 75 80
Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95
Ala Arg Asp Gly Asp Tyr Tyr Phe Asp Tyr Trp Gly Gln Gly Thr Leu
100 105 110
Val Thr Val Ser Ser
115

<210> 95
<211> 117
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
humanized antibody

<400> 95
Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala
1 5 10 15
Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ile Asn Tyr
20 25 30
Asn Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
35 40 45

35

Gly Ala Ile Phe Pro Gly Asn Gly Phe Thr Ser Tyr Asn Gln Lys Phe
50 55 60
Lys Gly Arg Val Thr Ile Thr Val Asp Lys Ser Thr Ser Thr Ala Tyr
65 70 75 80
Met Gln Leu Arg Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Phe Cys
85 90 95
Ala Arg Asp Gly Asp Tyr Tyr Phe Asp Tyr Trp Gly Gln Gly Thr Leu
100 105 110
Val Thr Val Ser Ser
115

<210> 96
<211> 105
<212> PRT
<213> Mus musculus

<400> 96
Gln Ile Val Leu Thr Gln Ser Pro Ala Ile Met Ser Ala Ser Leu Gly
1 5 10 15
Glu Glu Ile Thr Leu Thr Cys Ser Ala Ser Ser Ser Val Ser Tyr Met
20 25 30
His Trp Tyr Gln Gln Lys Ser Gly Thr Ser Pro Lys Leu Leu Ile Tyr
35 40 45
Arg Thr Ser Asn Leu Ala Ser Gly Val Pro Phe Arg Phe Ser Gly Ser
50 55 60
Gly Ser Gly Thr Phe Tyr Ser Leu Thr Ile Ser Ser Val Glu Ala Glu
65 70 75 80
Asp Ala Ala Asp Tyr Tyr Cys His Gln Trp Ser Met Tyr Thr Phe Gly
85 90 95
Gly Gly Thr Lys Leu Glu Ile Lys Arg
100 105

<210> 97
<211> 105
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
humanized antibody

<400> 97
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
1 5 10 15

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Asp Arg Val Thr Ile Thr Cys Ser Ala Ser Ser Ser Val Ser Tyr Met
      20                      25                      30
His Trp Tyr Gln Gln Lys Pro Gly Thr Ala Pro Lys Leu Leu Ile Tyr
      35                      40                      45
Arg Thr Ser Asn Leu Ala Ser Gly Val Pro Ser Arg Phe Ser Gly Ser
      50                      55                      60
Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu
      65                      70                      75                      80
Asp Phe Ala Thr Tyr Tyr Cys His Gln Trp Ser Met Tyr Thr Phe Gly
      85                      90                      95
Gln Gly Thr Lys Val Glu Ile Lys Arg
      100                      105

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<210> 98
 <211> 105
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 humanized antibody

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<400> 98
Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val Gly
  1                      5                      10                      15
Glu Glu Val Thr Ile Thr Cys Ser Ala Ser Ser Ser Val Ser Tyr Met
      20                      25                      30
His Trp Tyr Gln Gln Lys Pro Gly Thr Ala Pro Lys Leu Leu Ile Tyr
      35                      40                      45
Arg Thr Ser Asn Leu Ala Ser Gly Val Pro Ser Arg Phe Ser Gly Ser
      50                      55                      60
Gly Ser Gly Thr Phe Tyr Thr Leu Thr Ile Ser Ser Leu Gln Pro Glu
      65                      70                      75                      80
Asp Phe Ala Thr Tyr Tyr Cys His Gln Trp Ser Met Tyr Thr Phe Gly
      85                      90                      95
Gln Gly Thr Lys Val Glu Ile Lys Arg
      100                      105

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<210> 99
 <211> 105
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic

humanized antibody

<400> 99

Asp	Ile	Val	Met	Thr	Gln	Ser	Pro	Asp	Ser	Leu	Ala	Val	Ser	Leu	Gly
1				5				10						15	
Glu	Arg	Ala	Thr	Ile	Asn	Cys	Ser	Ala	Ser	Ser	Ser	Val	Ser	Tyr	Met
			20				25						30		
His	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Gln	Pro	Pro	Lys	Leu	Leu	Ile	Tyr
		35					40					45			
Arg	Thr	Ser	Asn	Leu	Ala	Ser	Gly	Val	Pro	Asp	Arg	Phe	Ser	Gly	Ser
	50					55					60				
Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Thr	Ile	Ser	Ser	Leu	Gln	Ala	Glu
	65				70					75					80
Asp	Val	Ala	Val	Tyr	Tyr	Cys	His	Gln	Trp	Ser	Met	Tyr	Thr	Phe	Gly
				85					90					95	
Gln	Gly	Thr	Lys	Val	Glu	Ile	Lys	Arg							
			100					105							